

Hello... again?



<https://github.com/probonopd/hello>

We need a desktop operating system that...

- Appeals to long-time Mac users
- Is truly focused on the desktop (not on mobile, not on servers)
- Is simple
- Is beautiful
- Is approachable
- Is hackable

A desktop operating system with focus on simplicity, minimalistic elegance, and usability (think Macintosh System 1). With the latest technologies underneath. Without the complexities of Linux distributions. NOT just a "theme". Definitely not a "clone" of anything. But something that long-time Mac users would instantly feel at home on.



Why Apple?

- The original Mac was a role model in usability
- Still unparalleled in many areas today
- Served as a role model for Mac OS X, which combined the power of UNIX with the friendliness of the Mac
- Lots of polish
- Things just work out of the box
- No configuration needed

...or so it was. In my opinion, Classic Mac peaked around System 7.1, and Mac OS X peaked around 10.4 (Tiger) to 10.6 (Snow Leopard)

Why not Apple?

- Their operating system is dongled to their hardware
- They don't support their hardware for >10 years
 - New operating systems just won't run
 - Old ones get no more security fixes
 - Perfectly capable 10-year old machines need to be trashed?
- They seem to be more concerned about watchfaces and memoji than about the Mac
 - Their mouse is a joke
 - Their Retina iMac with a spinning drive is slow as molasses
- Their desktop stuff is closed source
- Their Open Source operating system, Darwin, is not in a state that makes it viable on the desktop anytime soon

Trust me. I tried. 13 years ago, by founding the PureDarwin project

Why not Apple? Cont'd

- They are increasingly locking everything down
 - No more kexts
 - No more swappable drives and RAM
 - No more self-repair
 - No more apps from random developers
 - “Platform Security” essentially makes you a guest on your own machine
- They claim to respect your privacy -
but the first thing they ask you do is create an Apple ID...
 - You can't get even the bundled software anymore without giving Apple your identity
 - You can't distribute applications without giving Apple your identity
 - You can't use your phone without giving Apple your identity
- They want to control (and earn money on) how applications are distributed

They have become Big Brother from their 1984 ad





Why Linux?

- In the late 90s, around the time when Apple bought NeXT and announced to use UNIX for the Mac, I was playing with Linux for the first time
- I still remember that installing Caldera Linux and S.u.S.E. was a frightening exercise, with a text console, white letters on black background, occasional text-mode menus with blue backgrounds, asked esoteric questions about MBRs, filesystems, partitioning disks, made me spend hours to configure X11
- In the early 2000s I discovered the first Live CD. Knoppix. I started using Linux right away!
- Live ISOs changed the face of Linux for me forever. Burn, boot done. Nothing to fiddle around, nothing to configure!
- Open Source = all power to the user!

Why not Linux?

- “Linux” is a kernel, not a desktop operating system
 - Linux usability is a mess, far superior to the original Mac.
I have written a 6-part article series about #LinuxUsability
 - There are rivaling vendors trying to push their preferred stacks on everyone
 - Red Hat vs. Canonical
 - Rpm vs. deb
 - Flatpak vs. Snap
 - Wayland vs. Xorg
 - ...
- .

Why not Linux? Cont'd

- “Desktop Linux” is not a platform you can rely on
 - There is more than one Linux distribution, and they don’t agree on anything
 - Everyone ships different versions of everything
 - The same files in different places
 - The same versions under different numbers
 - Your test matrix (and your head) are gonna explode
- See my talks on Desktop Linux Platform Issues
 - XDG is way too static, assumes applications to be installed by a system administrator
 - Reality is way more dynamic, apps come and go
 - Some “Desktop Linux” people think what they have is good
 - Some “Desktop Linux” people think you should write apps for their skinned Ubuntu derivative
 - No one can agree on anything

Trust me. I tried. 16 years ago, by founding the AppImage project.

Why not Linux? Cont'd

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Trust me. I tried. 16 years ago, by founding the Appliance project.



Why Haiku?

- Haiku is a desktop-centric operating system built to model the now-defunct BeOS
- It has many similarities to the Mac
- It knows how to handle resources
- Lightweight and (usually) fast
- Open Source

I really do like Haiku. In fact, I've written an article series on it.

It is Plan Be...

Why not Haiku?

- Small developer community (still amazing progress given the few eyeballs)
- It caters to BeOS users, not Mac users
- No great web browsing experience
- No GPU hardware acceleration
- Limited application availability (better than expected but still)

Why FreeBSD?

- FreeBSD and OpenBSD form large parts of the UNIX layer in Mac OS X
- Its roots go back to the roots of UNIX
- Hearsay has it that it is doing well on servers, so its performance and reliability should be “there”
- A full operating system, not just a kernel
- ONE way to do things
- ONE ports tree and package repository
- ONE platform to test things on
- Huge library of ported software
- Linux compatibility layer for even more software
- ZFS: Redundancy, Compression, Snapshots, Deduplication,...
- A great community - welcoming even to me as an absolute beginner in BSD land

Why not FreeBSD?

- The FreeBSD installer in 2020... has a text console, white letters on black background, occasional text-mode menus with blue backgrounds, asks esoteric questions about MBRs, filesystems, partitioning disks, makes me spend hours to configure X11

But wait... one more thing!

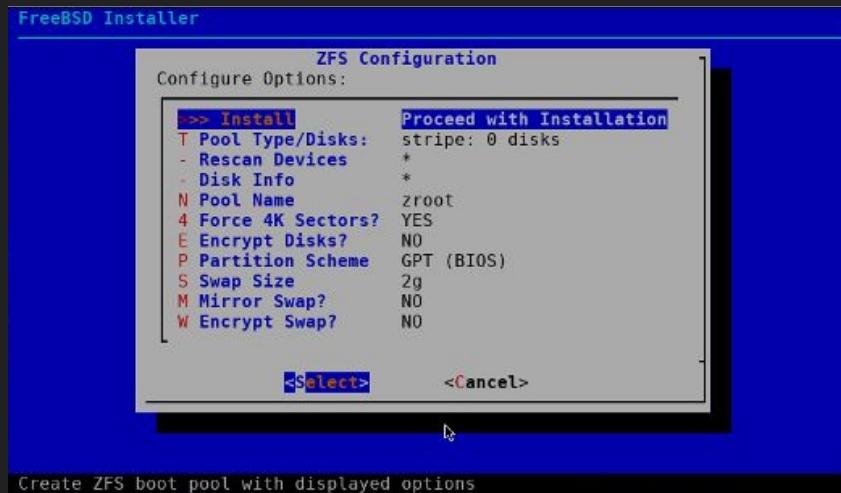


Why FuryBSD?

- In 2020s I discovered the first FreeBSD Live ISO that can boot from disk. FuryBSD.
- Once installed to disk, it's true FreeBSD. So I started using FreeBSD right away!
- FuryBSD changed the face of FreeBSD for me forever. Burn, boot done. Nothing to fiddle around, nothing to configure!
- Even better, building Live ISOs using its tools is fun and easy
- And the community is great as well!

Let's add some polish

From this...



To this...

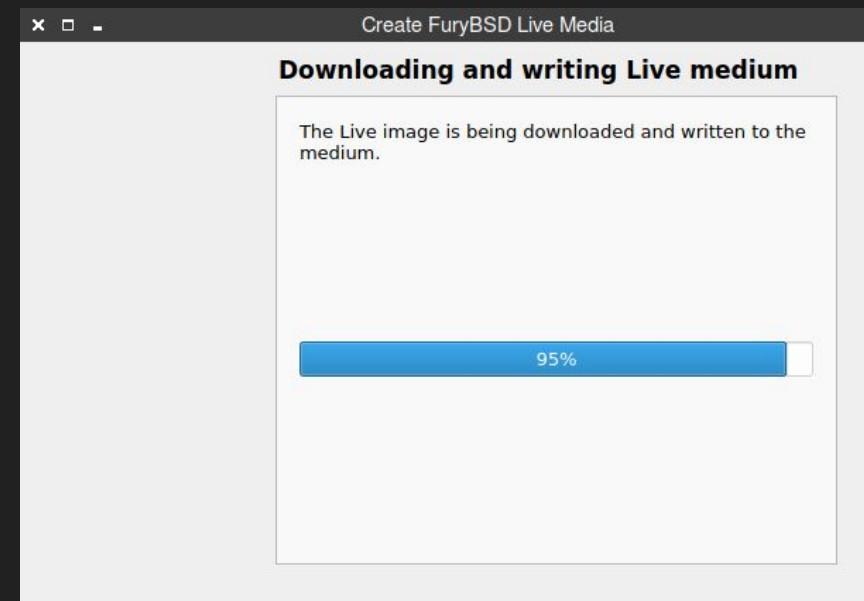


Let's add some polish

From this...

```
sudo dd  
if=/usr/local/furybsd/  
iso/FuryBSD-12.1-Xfce.  
iso of=/dev/dax bs=4m
```

To this...



Let's add some continuous builds

Releases Tags

Continuous build

skdemon released this 2 days ago

The latest continuous builds will be attached to this release.
(The [Sk18bd1](#) is misleading - the attached builds will be from the latest successful build run!)

Assets 34

FuryBSD-12.1-KDE-amd64.iso	1.09 GB
FuryBSD-12.1-KDE-amd64.iso.manifest	35.9 KB
FuryBSD-12.1-KDE-amd64.iso.md5	98 Bytes
FuryBSD-12.1-KDE-amd64.iso.zsync	3.78 MB
FuryBSD-12.1-KDE-i386.iso	1.87 GB
FuryBSD-12.1-KDE-i386.iso.manifest	36.1 KB
FuryBSD-12.1-KDE-i386.iso.md5	98 Bytes
FuryBSD-12.1-KDE-i386.iso.zsync	3.73 MB
FuryBSD-12.1-LUMINA-amd64.iso	1.43 GB
FuryBSD-12.1-LUMINA-amd64.iso.manifest	27.1 KB
FuryBSD-12.1-LUMINA-amd64.iso.md5	102 Bytes
FuryBSD-12.1-LUMINA-amd64.iso.zsync	2.95 MB
FuryBSD-12.1-LUMINA-i386.iso	1.43 GB
FuryBSD-12.1-LUMINA-i386.iso.manifest	27.4 KB
FuryBSD-12.1-LUMINA-i386.iso.md5	101 Bytes
FuryBSD-12.1-LUMINA-i386.iso.zsync	2.95 MB
FuryBSD-12.1-MATE-amd64.iso	1.73 GB
FuryBSD-12.1-MATE-amd64.iso.manifest	31.9 KB
FuryBSD-12.1-MATE-amd64.iso.md5	100 Bytes
FuryBSD-12.1-MATE-amd64.iso.zsync	3.47 MB
FuryBSD-12.1-MATE-i386.iso	1.73 GB
FuryBSD-12.1-MATE-i386.iso.manifest	32.1 KB
FuryBSD-12.1-MATE-i386.iso.md5	99 Bytes
FuryBSD-12.1-MATE-i386.iso.zsync	3.47 MB
FuryBSD-12.1-Xfce-amd64.iso	1.52 GB
FuryBSD-12.1-Xfce-amd64.iso.manifest	29.3 KB
FuryBSD-12.1-Xfce-amd64.iso.md5	100 Bytes
FuryBSD-12.1-Xfce-amd64.iso.zsync	3.03 MB
FuryBSD-12.1-Xfce-i386.iso	1.51 GB
FuryBSD-12.1-Xfce-i386.iso.manifest	29.5 KB
FuryBSD-12.1-Xfce-i386.iso.md5	99 Bytes
FuryBSD-12.1-Xfce-i386.iso.zsync	3.03 MB
Source code (.zip)	
Source code (.tar.gz)	

Let's add ZFS superpowers to the file manager

- Easy-to-browse backups (think TimeMachine but on steroids, using ZFS under the hood)
- Easy-to-use snapshots
- Data deduplication for .app bundles
- Easy graphical mounting of pools and images
- ... (I haven't even begun to understand all the wonders ZFS can do on the desktop)

So let's add all that good stuff to the file manager, so that it becomes easily accessible.

Err... WHICH file manager?!

Right. What about the desktop?

- Switchers from the Mac who liked System 7.1 and Mac OS X 10.4-6 have a hard time finding something that is a suitable replacement

Some criteria

- Should work well on those 2005+ Intel Macs that Apple considers obsolete
- I want to press Alt-Q to quit an application, not Alt-F4. I am not a Windows guy!
- Have I said I don't want to spend hours configuring things?
So, no KDE Plasma for me. Even if it could maybe be made Mac-like.
- Have I said I want usability, ease-of-use, and no vendor-pushed stacks?
So, no Gnome for me.
- Xfce, Mate. But well, they are not really Mac-like, and they rely on Gnome tech...



Why GNUStep?

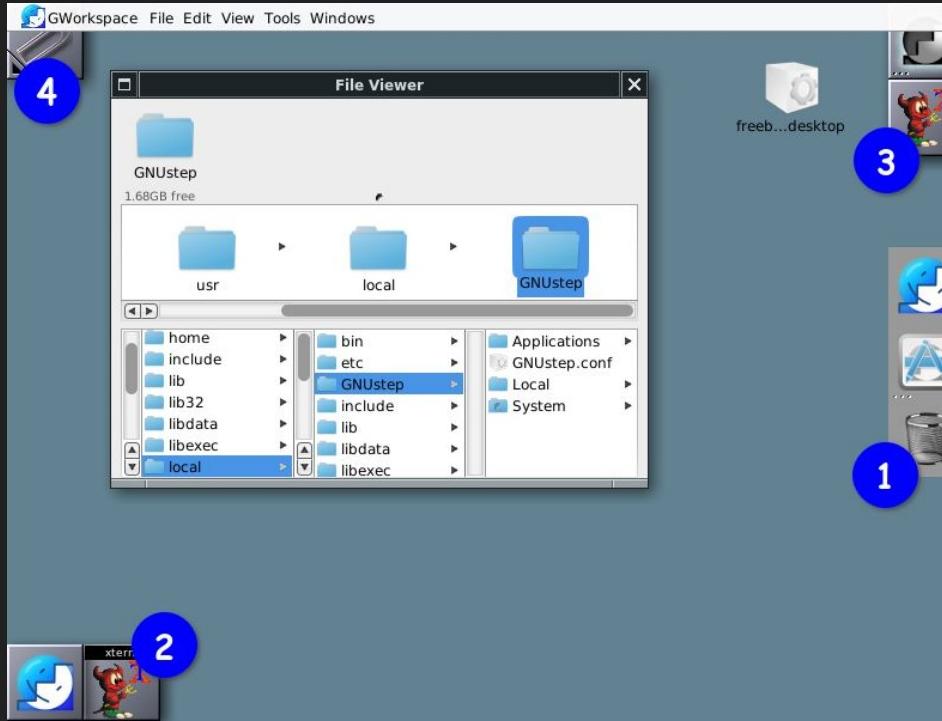
- GNUStep is an open source implementation of OPENSTEP, a specification originating from NeXT and Sun
- As NeXTSTEP and OPENSTEP morphed into Mac OS X, GNUStep, too, played catch-up
- It is Mac-like in many ways
- Lean and fast
- If positioned correctly, it could be used to produce binaries that run on Windows, Mac, Linux, FreeBSD,...

Why not GNUStep?

- GNU
- It is ugly. The default interface still looks like in the 90s
- People say it can be themed to look contemporary but why isn't it the default then?
- It's far from polished
- Are there any Objective-C developers left?
- Are there any apps that could compare to the likes of Scribus, Inkscape, Kdenlive,...?
- If most real-world apps are written in other cross-platform toolkits (Qt, Electron, WxWidgets) anyway, why then use GNUStep in the first place?

Why not GNUStep? Cont'd

I counted no less than four “Docks”. Has any usability guy looked at this, ever?



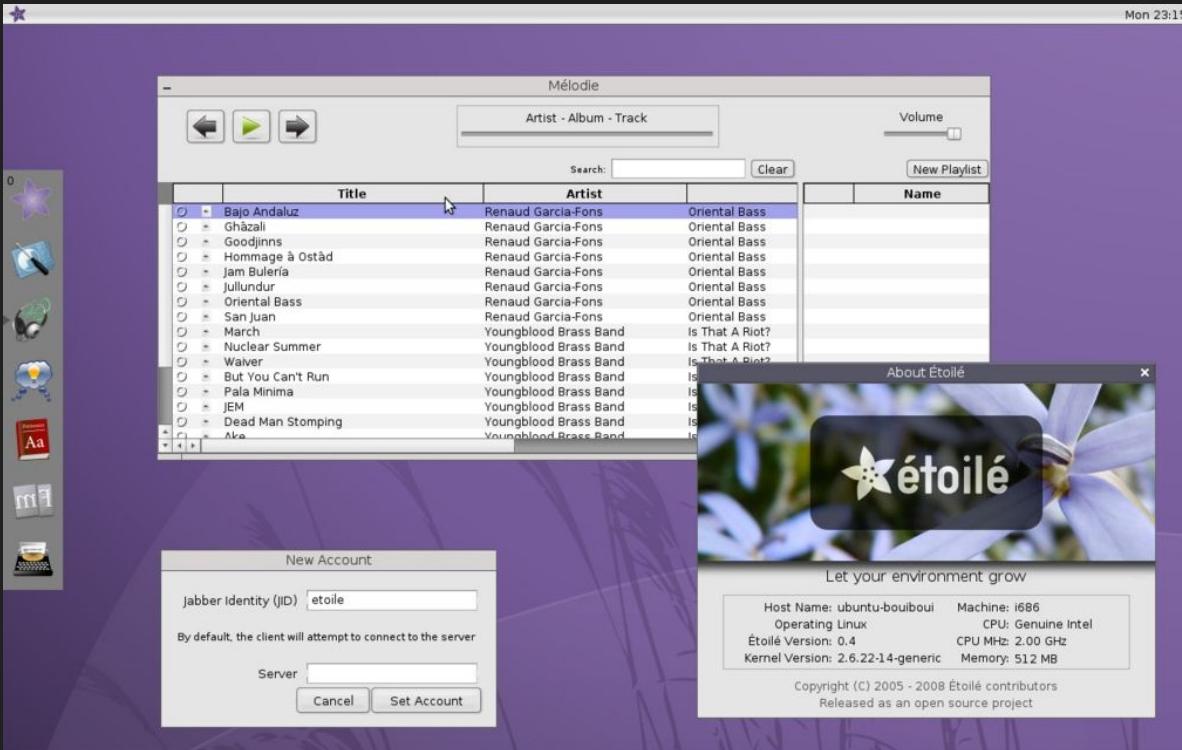


Apparently it can be made look nice - if one knows how... This lacks a polished Live system where everything works out of the box!





Why Étoilé?



Why not Étoilé?

- Yes, why not? What happened to it?
- Why did it not become a success?
 - They claimed it to be an OS but “only” delivered a desktop environment
 - Was not positioned as a way to write apps for Windows, Mac, Linux, FreeBSD,...
- I can’t even write its name. My system makes it “’Etoil’e”
(see - one thing that works on the Mac but sucks on Linux and, yes, FreeBSD)



Why write something from scratch in Qt?

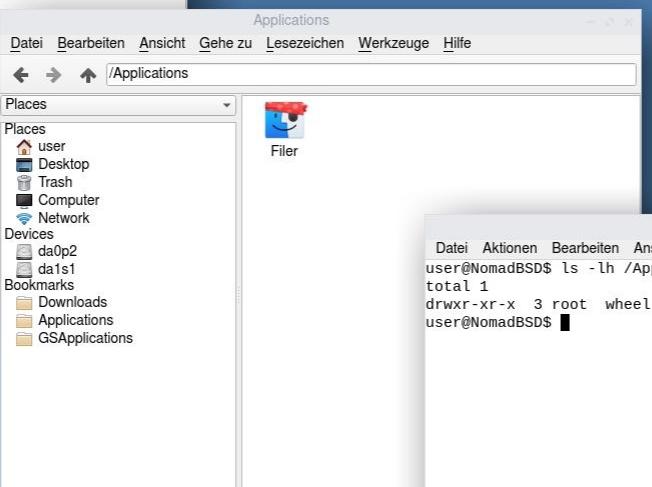
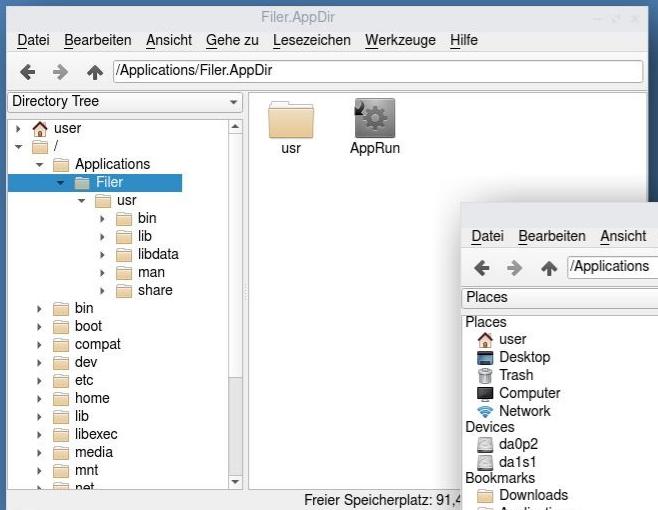
- Qt is used for many cross-platform applications
- There are many developers who know how to use it
- I don't really need much
 - A Mac-like file manager that supports .app bundles and .AppDir
 - A global menu bar at the top of the screen
 - Clock, WLAN, Speaker,... applets in the menu bar
 - A fast search bar that can launch apps and ideally can search all menu entries
 - A nice Dock
- Should be lean
 - I want to run this on 2 GB i386 machines, e.g. Atom netbooks, the first Intel Macs, Raspberry Pi,...
 - Code should be EASY for someone new to C++ and Qt

Why not write something from scratch in Qt?

- Qt is not entirely Mac-like (but close)
- It's C++
 - Actually I would prefer Golang (but it has no great GUI toolkit - yet?)
 - But... It's not so bad as long as you basically limit yourself to consuming the Qt-provided classes, don't introduce your own class hierarchies, and don't use esoteric C++ features
 - And... There is PyQt5



A working prototype



```
Shell № 1
Datei Aktionen Bearbeiten Ansicht Hilfe
user@NomadBSD$ ls -lh /Applications/
total 1
drwxr-xr-x 3 root wheel 5B 2 Sep. 19:33 Filer.AppDir
user@NomadBSD$
```



Where to go from here?

- <https://github.com/probonopd/hello>
Ideas, philosophy.
Check out the wiki and issues!
- <https://github.com/furybsd/furybsd-livecd/>
Continuous builds of Live ISOs with different existing desktops
- <https://github.com/probonopd/furybsd-livecd>
Highly experimental builds with a GNUstep based desktop
- <https://github.com/probonopd/filer>
Experimental file manager in Qt with .app and AppDir support

Note

This is a working draft of an unpublished document.
Your thoughts are welcome!